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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,263	10/16/2001	Frederick W.M. Stentiford	36-1570	2261
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EXAMINER				
CHANG, JON CARLTON				
ART UNIT		PAPER NUMBER		
2623				

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/977,263

Applicant(s)

STENTIFORD, FREDERICK W.M.

Examiner

Jon Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8, 11-22 and 24 is/are allowed.
- 6) ☐ Claim(s) 9, 10 and 23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Response to Applicant's Amendment

1. The amendment filed October 16, 2001, has been entered and made of record.

Priority

2. Applicant has not provided copies of international applications PCT/GB01/00504, and PCT/GB01/03802, to which Applicants are claiming benefit of priority. Pursuant to MPEP 1895, the Examiner requires Applicant to provide copies of the PCT applications in order to perfect Applicant's claim for benefit under 35 U.S.C. 120 and 365(c).

Specification

3. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.

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(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

4. The disclosure is objected to because of the following informalities:

a) The specification does not include the section headings described above.

b) The phrase, "I claim," or something similar must precede the claims. See MPEP 608.01(m).

c) The abstract of the disclosure is objected to because it is not limited to a single paragraph. Correction is required. See MPEP § 608.01(b). If a new abstract is provided, it should commence on a separate sheet. See 37 CFR 1.52(b)(4).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. Claims 9 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) In claim 9, "the greatest anomaly values" lacks clear antecedent basis. "Anomaly values" have not been previously mentioned. Also, since anomaly values need to be generated, they are not inherent in the regions.

b) In claim 10, "the anomaly values generated for the pixels representing that object" and "the anomaly values generated for other parts of the scene" lack antecedent basis.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 23 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,200,820 to Gharavi.

As to claim 23, Gharavi discloses a method of analysing a pattern represented by an ordered set of elements (the pel data of the frames of the video data) each having a value comprising, in respect of at least some of said elements:

selecting a group of test elements comprising at least two elements of the ordered set (column 5, lines 9-10, the mxn sized blocks);

selecting a group of comparison elements comprising at least two elements of the ordered set, wherein the comparison group has the same number of elements as the test group and wherein the elements of the comparison group have relative to one another the same positions in the ordered set as have the elements of the test group (column 5, lines 15-17; the search windows);

comparing the value of each element of the test group with the value of the correspondingly positioned element of the comparison group in accordance with a predetermined match criterion to produce a decision that the test group matches or does not match the comparison group (column 5, lines 25-34);

selecting further said comparison groups and comparing them with the test group (column 5, lines 39-41);

generating a distinctiveness measure as a function of the number of comparisons for which the comparison indicates a mismatch (column 5, line 65 to column 6, line 1; the indication of the block match is a measure of distinctiveness, i.e., low distinctiveness).

Allowable Subject Matter

7. Claims 1-8, 11-22 and 24 are allowed.
8. Claims 9 and 10 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

In claim 1, the limitation, "generating a measure of visual attention for each test pixel, in dependence upon the number of comparisons made for that test pixel for which the comparison results in a mismatch" in combination with the other limitations of the claim are neither disclosed nor suggested by the prior art of record. Claims 16-18 has similar language. Claims 2-12, 14, 15, 21-22 and 24 require the limitations of claim 1. Claims 19-20 depend from claim 18.

Claim 13 requires, "means for generating a measure of visual attention for each test pixel, in dependence upon the number of comparisons which identify a non-matching group." This limitation, in combination with the other limitations of the claim are neither disclosed nor suggested by the prior art of record.

References Cited

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 5,825,016 to Nagahata et al. discloses a focus detection device which determines which area of one CCD matches another CCD. The determination is made based on a non-match amount.

U.S. Patent 6,111,984 to Fukasawa discloses matching an input image to a reference image by detecting mismatching a portion between the images.

U.S. Patent 6,282,317 to Luo et al. discloses a method for automatic determination of main subjects in photographic images based on relative saliency features.

"Locating Salient Facial Features Using Image Invariants" by Walker et al. teaches finding points which are different from all other points in an image.

"Sample-Guided Progressive Image Coding" by Mahlmeister et al. teaches progressive image coding based on visual attention.

"Automatic Identification of Perceptually Important Regions in an Image" by Osberger et al. teaches using a number of low level features to develop an importance map for an image.

"A Model of the Visual Attention to Speed Up Image Analysis" by Gallet et al. teaches using visual attention to speed up image analysis.

"A Model of Saliency-Based Visual Attention for Rapid Scene Analysis" by Itti et al. teaches creating a saliency map for an image based on conspicuity maps for intensity, color and orientation.

"Algorithms for Defining Visual Regions-of-Interest: Comparison with Eye Fixations" by Privitera et al. teaches a number of algorithms for defining visual regions of interest.

"Adaptive Color Image Compression Based on Visual Attention" by Ouerhani et al. teaches an adaptive color image compression method which automatically selects a region of interest for higher reconstruction quality based on visual attention.


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jon Chang whose telephone number is (703)305-8439. The examiner can normally be reached on M-F 8:00 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703)308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jon Chang
Primary Examiner
Art Unit 2623

Jon Chang
September 30, 2004